

# SH combined Team

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## - Preliminary Event list:

- Arrival Time List
- dB/dt List.
- Bz List

## - What Criteria

- Same pre-defined CME parameters?
- Sub-categories for different ARLs?

## - 'Open Mic'

- Concerns / Constructive suggestions?



## Pre-Lim Event List

### Arrival time List

- Core initial test group

### Core List

- A. 13 April 2010 10:33 UT**  
(hit)
- B. 15 March 2013 07:12 UT**  
(hit)
- C. 15 March 2015 01:48 U**  
(hit; problematic, many models predict a late arrival)
- D. 7 January 2014 18:24 UT**  
(false alarm; only a weak discontinuity arrives)

## Pre-Lim Event List

### Bz List

- Core initial test group

### Core Lists

**A. 07 March 2012 01:14 UT**

SCOSTEP/ISEST. Patsourkos 2016

**B. 14 July 2012 17:00 UT**

ISEST; 'textbook event'

[http://solar.gmu.edu/heliophysics/index.php/07/14/2012\\_17:00:00 UTC](http://solar.gmu.edu/heliophysics/index.php/07/14/2012_17:00:00.UTC)

**C. 07 June 2011 06:47 UT**

SCOSTEP/ISEST. Bemporad 2010

**D. 7 January 2014 18:24 UT**

(false alarm; only a weak discontinuity arrives)

# Pre-Lim Event List

## Early dB/dt List

- Core initial test group

### GEM/CEDAR/SHINE

- A. 29 October 2013 06:00 UT**  
Dst = - 353nT.      Kp(max) = 9
- B. 14 December 2014 12:00UT**  
Dst = - 139nT.      Kp(max) = 8
- C. 31 August 2001 00:00 UT**  
Dst = - 40nT.      Kp(max) = 4
- D. 31 August 2005 10:00 UT**  
Dst = - 131nT.      Kp(max) = 7
- E. 5 April 2010 00:00 UT**  
Dst = - 73nT.      Kp(max) = 8-
- F. 5 August 2011 09:00 UT**  
Dst = - 113nT.      Kp(max) = 8-

## Pre-Lim Event List

### 4-stage event selection for ARL progression:

- **1. Core list [ARL 1-2?]**
  - small core collection (Can/should we coordinate for SH teams)
  - Provide constructive verification to new model development
  - Not intended as a 'down-select' process
  - Contain idealised events for proof of concept
- **2. Statistical list [ARL 2-4?]**
  - Larger historical list – 40 events enough?
  - 20 / 20 between solar cycle 23/24? Or do we change balance for post-STEREO triangulation?
  - These events should include ideal + non-ideal – so can they be identical for all SH teams?
- **3. Blind list [ARL 3-6?]**
  - Proxy to real-time environment? How/which many events?
- **4. Handover [ARL 5-8?]**
  - Operational real-time testing

## Pre-Lim Event List

### Statistical List

- 1. VARSITI / ISEST event list
- 2. HELCATS event list
  - GCS model fits already created – but not yet updated for the latest few years.
  - Limited to the STEREO generation of events.
- 3. NASA DONKI
  - Is this useful for blind testing?
  - Should blind test always be the same or be updated with the latest events?
- 4. Scientific publications?
  - Should we care about pre-defining all events or expect nuances between predictions are lost in the statistics?
  - Is it more feasible / practical to simply increase number of events for statistics?

## What Criteria?

### CME parameters?

- Should we establish same inputs parameters for all models?
- GCS model?
  - too constraining
  - Do we need additional parameters?
- Ensemble range
  - Define uncertainty range for these parameters?

### GCS output parameters

- A. **Source location** Lat + Lon
- B. **Tilt** CME tilt (PIL)
- C. **Half Angular Width**  
separation between CME legs
- D. **Height**  
height of CME legs
- E. **Aspect ratio**  
CME height vs cylindrical nose

## Open Mic

### Future Strategy

- What did the team leads miss?
- O2R? What else can we bring together driven from operational side